in bold type the changes which have been made to the claims by this Amendment.

Please cancel Claims 10-11, 14-15, 17 and 19-27 without prejudice.

12. (Amended) An apparatus, comprising an infrared detector with a plurality of detector elements that each include:

an amorphous silicon portion which has a selected temperature coefficient of resistance; and

first and second electrodes which are electrically coupled to said amorphous silicon portion at spaced locations thereon, said first and second electrodes and said amorphous silicon portion having a structural configuration which is selected to provide between said first and second electrodes through said amorphous silicon portion at a given temperature a resistance which is selected substantially independently of said temperature coefficient of resistance;

wherein said amorphous silicon portion is a layer having each of said first and second electrodes on one side thereof; and

including a third electrode on a side of said amorphous silicon layer opposite from said first and second electrodes, said third electrode having respective portions which are each aligned with a respective one of said first and second electrodes.

2. (Amended) An apparatus according to Claim ~~12~~ 1, wherein said amorphous silicon portion has a level of doping selected to provide said amorphous silicon portion with said selected temperature coefficient of resistance; and

wherein said structural configuration of said electrodes and said amorphous silicon portion is selected to set said resistance substantially independently of said doping level.

3. (Amended) An apparatus according to Claim ~~12~~ 1, wherein said first and second electrodes are made of a material which absorbs thermal energy, are in thermal communication with said amorphous silicon portion, and are sufficiently thin so that they are substantially absorbing to infrared radiation.

4. An apparatus according to Claim 3, wherein said electrodes are made from an alloy which includes aluminum and titanium.

5. An apparatus according to Claim 3, wherein said electrodes are made from an alloy which includes approximately equal amounts of aluminum and titanium.

6. (Amended) An apparatus according to Claim ~~12~~ 1, wherein said infrared detector includes an integrated circuit, a membrane having therein an amorphous silicon portion and said electrodes, and structure which supports said membrane at a location spaced above said integrated circuit and which electrically couples each of said first and second electrodes to said integrated circuit.

7. An apparatus according to Claim 6,

wherein said integrated circuit has thereon below said membrane a reflective surface which reflects infrared radiation; and

wherein a distance between said reflective surface and said membrane is selected as a function of infrared wavelengths of interest, so that a region between said membrane and said reflective surface will serve as a resonant cavity for said wavelengths of interest.

8. An apparatus according to Claim 7, wherein said membrane has therethrough a plurality of openings.

9. An apparatus according to Claim 8, wherein said openings each have a transverse dimension which is approximately twice said distance.

10 ~~13.~~ (Amended) An apparatus according to Claim ~~12~~ 1, including spaced first and second layers made of a material which is electrically insulating and substantially transparent to infrared radiation, said amorphous silicon layer and said electrodes being disposed between said first and second layers.

11 ~~28.~~ (New) A method of making an infrared detector having a plurality of detector elements, comprising the steps of:

providing an amorphous silicon layer which has a selected temperature coefficient of resistance;

fabricating first and second electrodes which are at spaced locations on one side of said amorphous silicon layer and which are electrically coupled to said amorphous silicon layer, including the step of structurally configuring said first and second electrodes and said amorphous silicon layer

so as to provide between said first and second electrodes through said amorphous silicon layer at a given temperature a resistance selected substantially independently of said temperature coefficient of resistance; and

fabricating a third electrode on a side of said amorphous silicon layer opposite from said first and second electrodes, said third electrode having respective portions which are each aligned with a respective one of said first and second electrodes.

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12 ~~29~~. (New) A method according to Claim ~~28~~ 11,

wherein said step of providing said amorphous silicon layer includes the step of doping said amorphous silicon layer to a level which provides said selected temperature coefficient of resistance; and

wherein said steps of fabricating said third electrode and configuring said first and second electrodes and said amorphous silicon layer are carried out so as to set said resistance substantially independently of said doping level.

13 ~~30~~. (New) A method according to Claim ~~28~~ 11, wherein said step of fabricating said first and second electrodes includes the steps of forming said first and second electrodes from a material which absorbs thermal energy and which is in thermal communication with said amorphous silicon layer, and forming said first and second electrodes to be sufficiently thin so that they are substantially absorbing to infrared radiation.

14 ~~31~~. (New) A method according to Claim ~~28~~ 11, further including the steps of:

supporting at a location spaced above an integrated circuit a membrane which has therein said amorphous silicon layer and said electrodes;

electrically coupling said first and second electrodes to said integrated circuit; and

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providing on said integrated circuit below said membrane a reflective surface which reflects infrared radiation, wherein a distance between said reflective surface and said membrane is selected as a function of infrared wavelengths of interest, so that a region between said membrane and said reflective surface will serve as a resonant cavity for radiation having said wavelengths of interest.

15 ~~1~~. (Amended) An apparatus, comprising an infrared detector with a plurality of detector elements that each include:

an amorphous silicon portion;

first and second insulating portions provided at spaced locations on said amorphous silicon portion; and

first and second electrodes which are electrically coupled to said amorphous silicon portion at spaced locations thereon, a substantial portion of said first electrode being disposed on said first insulating portion, and a substantial portion of said second electrode being disposed on said second insulating portion.

16 ~~32~~. (New) An apparatus according to Claim 15 ~~1~~, wherein said first and second electrodes are made of a material which absorbs thermal energy, are in thermal communication with said amorphous silicon portion, and are sufficiently thin so that they are substantially absorbing to infrared radiation.

17 ~~33~~. (New) An apparatus according to Claim 16 ~~32~~, wherein said electrodes are made from an alloy which includes aluminum and titanium.

18 ~~34~~. (New) An apparatus according to Claim 16 ~~32~~, wherein said electrodes are made from an alloy which includes approximately equal amounts of aluminum and titanium.

19 ~~35~~. (New) An apparatus according to Claim 15 ~~1~~, wherein said infrared detector includes an integrated circuit, a membrane having therein said amorphous silicon portion, said insulating portions and said electrodes, and structure which supports said membrane at a location spaced above said integrated circuit and which electrically couples each of said first and second electrodes to said integrated circuit.

20 ~~36~~. (New) An apparatus according to Claim 19 ~~35~~,

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wherein said integrated circuit has thereon below said membrane a reflective surface which reflects infrared radiation; and

wherein a distance between said reflective surface and said membrane is selected as a function of infrared wavelengths of interest, so that a region between said membrane and said reflective surface will serve as a resonant cavity for said wavelengths of interest.

21 ~~37~~. (New) An apparatus according to Claim 15 ~~1~~, wherein said first and second electrodes have interdigitated fingers.

22 ~~16~~. (Amended) A method of making an infrared detector having a plurality of detector elements, comprising the steps of:

providing an amorphous silicon portion which has a selected temperature coefficient of resistance;

fabricating first and second insulating portions at spaced locations on said amorphous silicon portion; and

fabricating first and second electrodes which are at spaced locations on said amorphous silicon portion and which are electrically coupled to said amorphous silicon portion, including the step of structurally configuring said electrodes so that a substantial portion of said first electrode is disposed on said first insulating portion, and a substantial

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